

Brass Pipe Specifications *and* Memoranda Book



Alpha Brass Pipe A. I. A. File No. 29 b 4

Brass Pipe Specifications *and* Memoranda Book



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CHASE BRASS & COPPER CO.

Incorporated

WATERBURY ✓ CONNECTICUT

Specifications for ALPHA BRASS PIPE

1. KIND of PIPE

All hot and cold water supply lines, and all branches to plumbing fixtures shall be I. P. S. & T. (iron pipe size and thickness) Alpha* brass pipe semi-annealed in suitable condition for threading and bending with trade-mark stamped at least every twelve inches on each piece.

*Alpha Brass pipe is specified because it contains more copper and lead than usual and is believed to be a better pipe. If other pipe is to be substituted it must be equal to Alpha in alloy, quality and characteristics and also with the written consent of the specifying architect or builder.

2. GUARANTEE

Alpha brass pipe has the Alpha trade-mark stamped approximately every 12 inches along every length.

Alpha brass pipe contains not less than 65% copper, 0.4% lead, and the balance zinc.

Alpha brass pipe, $\frac{1}{8}$ " to 4" inclusive, is subjected to 2500 pounds water pressure per sq. in., and all sizes above 4" to 1000 pounds water pressure per sq. in.

Alpha brass pipe will withstand being bent cold through 180° (around

a pin $1\frac{1}{2}$ times the inside diameter of the tube) without cracking.

Alpha brass pipe, properly used, will cut and thread easily and make good sharp threads.

Alpha brass pipe is straight, sound and uniform. It will not vary more than 5% over or under the standard weights.

Alpha brass pipe is given a special tempering treatment that removes all possible stress or strains in the metal which might cause splitting or cracking.

If Alpha brass pipe, when properly used and installed, is unsatisfactory in any of the above ways, we will, after any necessary investigation, immediately and willingly make the following reparation:

1. Any such imperfect pipe will be replaced with pipe meeting these specifications without any charge to the customer for the new pipe or shipping costs.

2. If such imperfect pipe is discovered after it has been installed, we will pay the labor cost of removing the unsatisfactory pipe, we will furnish pipe that will meet these specifica-

MEMORANDA

1901-1902

1. The first part of the memorandum deals with the general principles of the subject. It is divided into two main sections, the first of which is devoted to the history of the subject, and the second to the principles of the subject. The history of the subject is traced back to the time of the first discovery of the subject, and the principles of the subject are discussed in relation to the various theories of the subject.

2. The second part of the memorandum deals with the application of the principles of the subject to the various cases of the subject. It is divided into two main sections, the first of which is devoted to the application of the principles of the subject to the various cases of the subject, and the second to the application of the principles of the subject to the various cases of the subject.

tions free of all charges, and will also pay for reasonable labor costs of installing the new pipe.

3. PRESSURE

The following test pressures shall be applied at the mill to the respective sizes of pipe, as indicated in table:

NOMINAL SIZE	TEST PRESSURE
1/8 in. to 4 in. inclusive	2,500 lb. per sq. in.
Above 4 in.	1,000 lb. per sq. in.

4. BENDING

The pipe shall withstand being bent cold through 180°, without cracking on the outside of the bend, around a pin 1½ times the inside diameter of the pipe.

5. THREADING, REAMING and SAWING

The pipe shall withstand cutting and threading in a satisfactory manner.

Where required the pipe must have a good Briggs standard thread, which will make a tight joint under 150 lb. per sq. in. cold water test. The thread must not vary more than one-half turn either way when tested with a Pratt & Whitney standard gage.

Pipe may be sawed, or cut with thin wheel cutters, or any of the improved cutters such as the knife cutter. All pipes must be reamed to

remove all burrs and cut into the pipe wall so as to slightly flare the opening.

6. THREAD PROTECTION

Solid tapped rings or split couplings shall be provided as thread protectors on all sizes three inches in diameter or larger to prevent injury to threads prior to installation.

7. FITTINGS

(a) Cast pattern fittings shall be used on all pipe from 2 inches to 5 inches in diameter, or wherever the working pressure exceeds 190 pounds per sq. in.

(b) Malleable pattern fittings may be used on all pipe 1½ inches or smaller in diameter, providing the working pressure does not exceed 190 pounds per sq. in.

(c) Flanged fittings shall be used on all sizes over 6 inches.

(d) All fittings shall be made by a reputable manufacturer and tested as to threads and freedom from flaws. The composition of the fitting shall come within the following limits:

Copper,	not less than	65.00
Lead,	3.50 to	6.50
Iron,	not over	0.35
Tin,	not over	4.75
Zinc,	remainder	

(e) Couplings shall be sound and free from defects. Threads must be

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clean cut, tapped straight and of such pitch as will make a tight joint.

The use of couplings shall be avoided wherever possible, not more than 5% of the total pipe is to be of short lengths of pipe except between fittings.

All joints in risers shall be made at floor branches. In cases where vertical clamp supports are necessary a coupling or fitting shall be provided immediately above the clamp to carry the weight of the pipe.

(f) All nipples must be cut by the contractor from trade-marked lengths of Brass Pipe, I. P. S. that will meet the above specifications for brass pipe, or the contractor must obtain guarantee from source of supply that they were cut from such Brass Pipe, I. P. S.

8. PACKING

The use of wicking or other packing material will not be allowed, and all threaded joints shall be made tight without recourse to such methods. Lead, litharge or similar material, if used, must be applied to the outside of the pipe threads and not to the inside of fittings.

9. INSTALLATION

All pipes installed shall be of such size that the water flow will be as specified when one-quarter of the plumbing fixtures are in use at one

time, and the pressure at the meter is normal. No extra diameter allowance is required for corrosion.

10. PIPE WRENCHES

Pipe shall be installed by friction tools that will not cut, dent, flatten or otherwise damage the pipe. Any pipe damaged by installation shall be replaced by the contractor without extra charge.

11. SUPPLY, WASTE, VENT

All supply, waste and vent lines running through concrete, ashes, cinders shall be I. P. S. & T. Alpha* brass pipe for such portions as run through concrete or fill, and shall be wrapped with tarred paper or felt in such a manner that the concrete, ashes, etc., shall at no time come in contact with the brass pipe. If any other pipe is to be used it must have the specific approval of the architect.

12. EXPANSION

All water pipe shall be installed so that expansion and contraction will be taken up without harm to the pipe system. At points where branches are taken off from mains or risers, pipe must be free to expand and contract without undue strain of the fittings and threads. A three-plane expansion unit shall be used where branches are two inches or

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more in diameter, and for smaller sizes a two-plane expansion unit may be used.

Each riser shall have for each fifty feet of length an expansion unit and anchor. Wherever possible a U-bend in one piece having a radius of not less than five times the diameter of the pipe in the center of the U and at both ends, and a length of from three to five feet shall be used; where not possible the expansion unit may be in the form of a three-plane joint for pipe over two inches, and two-plane for smaller pipe.

13. PIPE SUPPORTS

All horizontal and vertical runs shall be provided with adjustable pipe hangers. For sizes $\frac{3}{4}$ in. and larger, hangers shall not be more than 10 feet apart. For $\frac{1}{2}$ in. and smaller

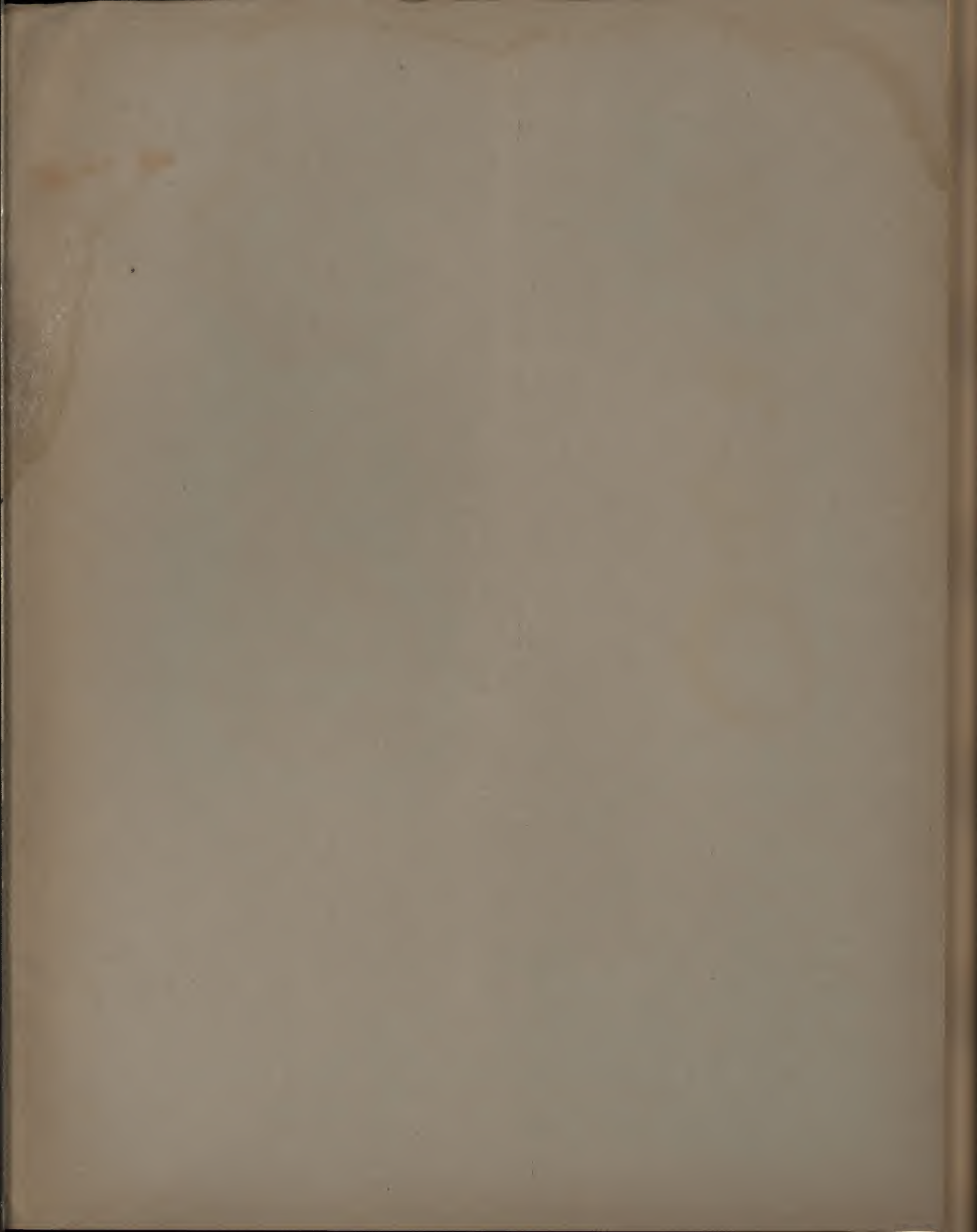
sizes, they shall not be more than 8 feet apart. Hangers must be securely attached to floor, wall or pipe shaft construction, and arranged to hold pipe horizontal, vertical, or at the specified pitch.

Pipe supports between expansion joints shall be anchors, and arranged to confine the expansion between anchors to the expansion unit provided. Anchors on vertical risers shall be placed midway between the expansion loops so that the movement at branches will be reduced to the minimum.

14. PRESSURE TEST

All water piping shall be made tight at a hydrostatic pressure of 250 lb. per sq. in. before being concealed or covered up by the building construction.

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